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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/587,850	07/28/2006	Max Mayer		9774
7590 Bernhard Bausenwein Eichenstr 32 Hagelstadt, D-93095 GERMANY		06/24/2009	EXAMINER CHAPEL, DEREK S	
			ART UNIT 2872	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/587,850	Applicant(s) MAYER ET AL.
	Examiner DEREK S. CHAPEL	Art Unit 2872

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 7/28/06, 10/1/08, 11/26/08, 3/10/09.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 2-30 is/are pending in the application.

4a) Of the above claim(s) 9-11, 19 and 27-29 is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 2-8, 12-18, 20-26 and 30 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 28 July 2006 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsman's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____

4) Interview Summary (PTO-413)
Paper No(s)/Mail Date _____

5) Notice of Informal Patent Application

6) Other: _____

DETAILED ACTION

Status Of Claims

1. This Office Action is in response to an amendment received 3/10/2009 in which Applicant lists claim 1 as being canceled, claims 9-11, 19, and 28-29 as being withdrawn, claim 27 as being withdrawn-currently amended, claims 3-5, 8, 20 and 30 as being previously presented, and claims 2, 6-7, 12-18, and 21-26 as being currently amended. It is interpreted by the examiner that claims 2-30 are pending.

Status Of Case

2. An examination of this application reveals that applicant is unfamiliar with patent prosecution procedure. While an inventor may prosecute the application, lack of skill in this field usually acts as a liability in affording the maximum protection for the invention disclosed. Applicant is advised to secure the services of a registered patent attorney or agent to prosecute the application, since the value of a patent is largely dependent upon skilled preparation and prosecution. The Office cannot aid in selecting an attorney or agent.

A listing of registered patent attorneys and agents is available on the USPTO Internet web site <http://www.uspto.gov> in the Site Index under "Attorney and Agent Roster." Applicants may also obtain a list of registered patent attorneys and agents located in their area by writing to the Mail Stop OED, Director of the U. S. Patent and Trademark Office, PO Box 1450, Alexandria, VA 22313-1450

Election/Restrictions

3. Applicant's election without traverse of Group V in the reply filed on 3/10/2009 is acknowledged.
4. Claims 9-11, 19, and 27-29 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to at least one nonelected group, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 3/10/2009.

Information Disclosure Statement

5. The listing of references in the Search Report is not considered to be an information disclosure statement (IDS) complying with 37 CFR 1.98. 37 CFR 1.98(a)(2) requires a legible copy of: (1) each foreign patent; (2) each publication or that portion which caused it to be listed; (3) for each cited pending U.S. application, the application specification including claims, and any drawing of the application, or that portion of the application which caused it to be listed including any claims directed to that portion, unless the cited pending U.S. application is stored in the Image File Wrapper (IFW) system; and (4) all other information, or that portion which caused it to be listed. In addition, each IDS must include a list of all patents, publications, applications, or other information submitted for consideration by the Office (see 37 CFR 1.98(a)(1) and (b)), and MPEP § 609.04(a), subsection I. states, "the list ... must be submitted on a separate paper." Therefore, the references cited in the Search Report have not been considered. Applicant is advised that the date of submission of any item of information or any missing element(s) will be the date of submission for purposes of determining

compliance with the requirements based on the time of filing the IDS, including all "statement" requirements of 37 CFR 1.97(e). See MPEP § 609.05(a).

Drawings

6. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the position vector Li (see at least claim 30) and the common ground plane (see at least claim 2) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

7. The drawings are objected to because the numbers should be in US format (i.e. 0,880 should be 0.880 in figure 6A). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

8. Any figure showing only that which is old should be designate by a legend such as --Prior Art--. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified

and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

9. It is noted by the examiner that since many embodiments of the invention appear to be shown by the drawings, the claimed invention may be clarified by the applicant indicating what drawings pertain to the claims.

Specification

10. The abstract of the disclosure is objected to because

- a. All instances of "said" should be changed to --the--;
- b. "complementarity" is not a proper word;
- c. All instances of "reflexion" should be changed to --reflection--.

Correction is required. See MPEP § 608.01(b).

11. The disclosure is objected to because of the following informalities:

- a. On the first page of the specification, "LCD" should be defined;
- b. All instances of quotation marks should be changed to the US format;
- c. The brief description of the drawings should include references to figures 1A, 1B, 2A, 2B, 4A, 4B, 5A, 5B, 6A, 6B, 6C, 6D, 6E, 7A, 7B, 8A, 8B, 12A, 12B, 13A, 13B, 13C, 13D, 13E, 13F, 13G, 13H, 13I, 14A and 14B;
- d. "tow" on the fourth line of page 17 of the specification should be changed to --two--.

Appropriate correction is required.

12. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

13. Claims 2-8, 12-18, 20-26 and 30 are objected to because of the following informalities:

a. "Pi (i=1,2,3)" should be changed to --Pi, wherein i=1, 2, or 3-- (see at least claim 30);

b. "doubled or two-sided" is not proper English and should be changed to --double or two-sided-- (see at least claims 12 and 25).

c. Claims 2-8, 12-18, and 20-26 are objected to for inheriting the same informalities through their dependency from claim 30. Appropriate correction is required.

d. On the third line of claim 18, "modulator" should be changed to --modulators--.

14. Regarding claims 13 and 18, the phrase "e.g." (for example) renders the claim problematic because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

15. Claim 5 recites the limitation "said composed prism". There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 112

16. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

17. Claims 2-8, 12-18, 20-26 and 30 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The originally filed disclosure did not contain any reference to a position vector Li (see at least claim 30). Position vectors appear to be first mentioned in the amendment received 10/1/2008 and therefore constitutes new matter. Claims 2-8, 12-18, and 20-26 are rejected for inheriting the same informalities through their dependency from claim 30.

18. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

19. Claims 2-8, 12-18, 20-26 and 30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. It is not clear if "(cross-polarizer)" in the beginning of each of the claims is intended to be a claim limitation or not because of the parentheses. Therefore,

"(cross-polarizer)" should be deleted from the claims or the parentheses removed.

b. It is not clear what makes up position vector L_i (see at least claim 30) since position vectors (L_1, L_2 , etc.) are not described in the specification or shown in the drawings.

c. The claimed equations are not described in the specification to clarify their meaning nor are any details given showing which embodiment/drawings are associated with the equations.

d. Element "k" in the third equation of claim 30 is not defined and therefore the scope of the third equation and claim 30 cannot be determined.

e. Due to poor line quality of the third equation in claim 30, it is not clear which dashes are equal signs and which are minus signs.

f. It is not clear what "a" and "b" in " $(a \circ b)$ " and " $(a \times b)$ " are supposed to represent (see at least claim 30). Do "a" and "b" represent any of the other variables such as $P_1, P_2, P_3, V_1, V_2, V_3, L_1, L_2, L_3, N_1$...etc.?

g. It is not clear what makes up "a common ground plane" (see at least claim 2) since "a common ground plane" is not shown in the drawings. Further, "a common ground plane" is mentioned twice in claim 2. Are there two separate common ground planes being claimed or is the second "common ground plane" actually referring to the previous common ground plane and therefore, should be written as --the common ground plane--?

- h. It is not clear what is meant by "doubled or two-sided cartesian polarizer" in claims 12 and 25 since it is believed that all polarizers have a least two sides (i.e. top and bottom).
- i. Claim 26 provides for the use of a cross-polarizer, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

The claims, as currently presented, are so unclear that the scope of what is being claimed is unclear. Therefore, at this time, no art is being set forth as reading on the claimed invention because examiner is unable to ascertain what is actually being claimed.

Other Related Art

- 20. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
- 21. Applicant is directed to Fulkerson et al., U.S. Patent Number 6,490,087 B1, especially figures 3-9 of Fulkerson which show a reflective LCD system with polarization beam splitting prism cubes.

Amendment Guidelines

22. For the applicant's convenience and to assist you in providing future amendments that are in compliance with the M.P.E.P, section C of section 714 of the M.P.E.P. regarding amendments to the claims has been copied below:

C. Amendments to the Claims

Each amendment document that includes a change to an existing claim, including the deletion of an existing claim, or submission of a new claim, must include a complete listing of all claims ever presented (including previously canceled and non-entered claims) in the application. After each claim number, the status identifier of the claim must be presented in a parenthetical expression, and the text of each claim under examination as well as all withdrawn claims (each with markings if any, to show current changes) must be presented.

The listing will serve to replace all prior versions of the claims in the application. (A) Status Identifiers: The current status of all of the claims in the application, including any previously canceled or withdrawn claims, must be given. Status is indicated in a parenthetical expression following the claim number by one of the following status identifiers:

(original),
(currently amended),
(previously presented),
(canceled),
(withdrawn),
(new),
or (not entered).

The status identifier (withdrawn – currently amended) is also acceptable for a withdrawn claim that is being currently amended. See paragraph (E) below for acceptable alternative status identifiers.

Claims added by a preliminary amendment must have the status identifier (new) instead of (original), even when the preliminary amendment is present on the filing date of the application and such claim is treated as part of the original disclosure. If applicant files a subsequent amendment, applicant must use the status identifier (previously presented) if the claims are not being amended, or (currently amended) if the claims are being amended, in the subsequent amendment. Claims that are canceled by a preliminary amendment that is present on the filing date of the application are required to be listed and must have the status identifier (canceled) in the preliminary amendment and in any subsequent amendment.

The status identifier (not entered) is used for claims that were previously proposed in an amendment (e.g., after-final) that was denied entry.

> In an amendment submitted in a U.S. national stage application, claims that were present on the international filing date or rectified pursuant to PCT Rule 91 must have the status identifier (original); claims that were amended or added under PCT Article 19 or 34 with effect in the U.S. national stage application must have the status identifier (previously presented); and claims that were canceled pursuant to PCT Article 19 or 34 with effect in the U.S. national stage application must have the status identifier (canceled). If the amendment submitted in the U.S. national stage application is making a change in a claim, the status identifier (currently amended) must be used for that claim.<

For any amendment being filed in response to a restriction or election of species requirement and any subsequent amendment, any claims which are non-elected must have the status identifier (withdrawn). Any non-elected claims which are being amended must have either the status identifier (withdrawn) or (withdrawn – currently amended) and the text of the non-elected claims must be presented with markings to indicate the changes. Any non-elected claims that are being canceled must have the status identifier (canceled).

(B) **Markings to Show the Changes:** All claims being currently amended must be presented with markings to indicate the changes that have been made relative to the immediate prior version. The changes in any amended claim must be shown by strike-through (for deleted matter) or underlining (for added matter) with 2 exceptions: (1) for deletion of five or fewer consecutive characters, double brackets may be used (e.g., [[eroor]]); (2) if strike-through cannot be easily perceived (e.g., deletion of number “4” or certain punctuation marks), double brackets must be used (e.g., [[4]]). As an alternative to using double brackets, however, extra portions of text may be included before and after text being deleted, all in strike-through, followed by including and underlining the extra text with the desired change (e.g., _____ number 4 as number 14 as). An accompanying clean version is not required and should not be presented. Only claims of the status “currently amended” or “withdrawn” will include markings. Any claims added by amendment must be indicated as “new” and the text of the claim must not be underlined.

(C) **Claim Text:** The text of all pending claims under examination and withdrawn claims must be submitted each time any claim is amended. The text of pending claims not being currently amended, including withdrawn claims, must be presented in clean version, i.e., without any markings. Any claim presented in clean version will constitute an assertion that it has not been changed relative to the immediate prior version except to omit markings that may have been present in the immediate prior version of the claims. A claim being canceled must be indicated as “canceled;” the text of the claim must not be presented. Providing an instruction to cancel is optional. Canceled and not entered claims must be listed by only the claim number and status identifier, without presenting the text of the claims. When applicant submits the text of canceled or not-entered claims in the amendment, the Office may accept such an amendment, if the amendment otherwise complies with 37 CFR 1.121, instead of sending out a notice of non-

compliant amendment to reduce the processing time.

(D) Claim Numbering: All of the claims in each amendment paper must be presented in ascending numerical order. Consecutive canceled or not entered claims may be aggregated into one statement (e.g., Claims 1 – 5 (canceled)).

A canceled claim can be reinstated only by a subsequent amendment presenting the claim as a new claim with a new claim number. The original numbering of the claims must be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. For example, when applicant cancels all of the claims in the original specification and adds a new set of claims, the claim listing must include all of the canceled claims with the status identifier (canceled) (the canceled claims may be aggregated into one statement). The new claims must be numbered consecutively beginning with the number next following the highest numbered claim previously presented (whether entered or not) in compliance with 37 CFR 1.126.

Example of listing of claims:

Claims 1-5 (canceled)

Claim 6 (withdrawn): A process for molding a bucket.

Claim 7 (previously presented): A bucket with a handle.

Claim 8 (currently amended): A bucket with a ____ green blue handle.

Claim 9 (withdrawn): The process for molding a bucket of claim 6 using molten plastic material.

Claim 10 (original): The bucket of claim 8 with a wooden handle.

Claim 11 (canceled)

Claim 12 (previously presented): A bucket having a circumferential upper lip.

Claim 13 (not entered)

Claim 14 (new): A bucket with plastic sides and bottom.

Conclusion

23. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DEREK S. CHAPEL whose telephone number is (571)272-8042. The examiner can normally be reached on M-F 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephone B. Allen can be reached on 571-272-2434. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/D. S. C./
Examiner, Art Unit 2872
6/18/2009

/Stephone B. Allen/
Supervisory Patent Examiner
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